National Institute of Environmental Health Sciences

Air pollution and hospitalization for respiratory diseases among children in Isfahan, Iran

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Abstract:

BACKGROUND: Adverse effects of urban air pollution on human health notably the paediatric age group is of great importance. Limited data exist from developing countries. This study investigates the hospitalization of children because of respiratory diseases and air pollution levels in Isfahan, the second large city in Iran. METHODS: Hospital admission data were collected retrospectively from 120 randomly selected respiratory patients in Pediatric wards from the main referral hospital in Isfahan from March 2005-2006, and simultaneous air pollution data were collected from two monitoring stations located in south and north parts of the city. RESULTS: The result of statistical modeling using generalized linear Poisson regression showed that PM(10) and sulfur dioxide (SO(2)) concentrations had statistically significant positive association with number of respiratory admissions of children. CONCLUSION: This study confirms the findings of previous studies about the association of air pollutants' levels with hospitalization because of respiratory diseases in young children. Air pollution continues to pose a threat to public health notably in the paediatric age group, and underscores the need to re-examine national environmental health policies and standards in developing countries.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution

Air Pollution: Particulate Matter, Other Air Pollution

Air Pollution (other): SO2; NO2; CO

Geographic Feature:

resource focuses on specific type of geography

Urban

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Asia

Asian Region/Country: Other Asian Country

Other Asian Country: Iran

Health Impact:

specification of health effect or disease related to climate change exposure

Respiratory Effect

Respiratory Effect: Other Respiratory Effect

Respiratory Condition (other) : ICD-9 codes 460-519

Population of Concern: A focus of content

Population of Concern:

populations at particular risk or vulnerability to climate change impacts

Children

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Time Scale Unspecified